

CLAIMS

[1] A crosslinked polymer produced by polymerizing at least one crosslinkable monomer and then bonding a phthalocyanine skeleton to the resultant polymer.

5 [2] The crosslinked polymer according to claim 1 wherein the degree of crosslinking in the crosslinked polymer is not less than 1%.

[3] The crosslinked polymer according to claim 1 or 2 wherein the bonding amount of the phthalocyanine skeleton within the crosslinked polymer is 5 to 1000 $\mu\text{mol/g}$ on a dry basis.

10 [4] The crosslinked polymer according to any of claims 1 to 3 wherein the bond through which the phthalocyanine skeleton and the crosslinked polymer are bonded to each other is only a covalent bond.

15 [5] The crosslinked polymer according to any of claims 1 to 4 wherein the phthalocyanine skeleton and the crosslinked polymer are bonded to each other by use of a reaction of an active hydrogen-containing group with a group reactive with active hydrogen in a reaction between a compound having a phthalocyanine skeleton and the crosslinked polymer.

20 [6] The crosslinked polymer according to claim 5 wherein the compound having a phthalocyanine skeleton

contains a group reactive with active hydrogen and the crosslinked polymer contains an active hydrogen-containing group.

[7] The crosslinked polymer according to claim 5 wherein the compound having a phthalocyanine skeleton contains an active hydrogen-containing group and the crosslinked polymer contains a group reactive with active hydrogen.

[8] The crosslinked polymer according to any of claims 5 to 7 wherein the active hydrogen-containing group is a hydroxyl, amino or thiol group.

[9] The crosslinked polymer according to any of claims 5 to 8 wherein the group reactive with active hydrogen is at least one group selected from dihalogenotriazine, monohalogenotriazine, trihalogenopyrimidine, sulfatoethylsulfone, dihalogenoquinoxaline, dihalogenopyridazinone, dihalophthalazine, sulfatoethylsulfone amide, mono- or dihalogenopyrimidine, dihalogenobenzothiazole, aldehyde, ethylenic double bond, oxirane ring, acid chloride, and isocyanate.

[10] The crosslinked polymer according to any of claims 1 to 9, having a BET specific surface area of not less than 10 m²/g.

[11] The crosslinked polymer according to any of claims 1 to 10, wherein the crosslinked polymer is a crosslinked polymer produced by polymerizing at least one monomer containing an active hydrogen-containing group or its precursor, or a group reactive with active hydrogen or its precursor.

[12] The crosslinked polymer according to any of claims 1 to 11 wherein the phthalocyanine skeleton is at least one group selected from metal-free phthalocyanines, or copper, iron, nickel, cobalt, zinc or aluminum metal-containing phthalocyanines.

[13] A process for producing the crosslinked polymer according to any of claims 1 to 12, characterized by reacting an active hydrogen-containing group with a group reactive with active hydrogen.

[14] A molded adsorbent comprising the crosslinked polymer according to any of claims 1 to 12 held onto a binder.

[15] A compound-separating tool comprising at least one crosslinked polymer according to any of claims 1 to 12 which has been coated onto, spread onto, packed or filled into, installed in, inserted into, or hermetically sealed into a support with or without a binder.

[16] A compound-separating tool comprising the molded adsorbent according to claim 14 which has been coated onto, spread onto, packed or filled into, installed in, inserted into, or hermetically sealed into a support with or without a binder.

[17] The compound-separating tool according to claim 15 or 16, which is a column, cartridge, filter, plate, or capillary for solid phase extraction, liquid chromatography, or gas chromatography, or a plate for thin layer chromatography.

[18] A method for treating polycyclic organic materials, characterized by adsorbing, desorbing, or separating polycyclic organic materials present as a mixture in a solution or a gas by use of the compound-separating tool according to any of claims 15 to 17.